

SEARCH REQUEST FORM

Requestor's
Name:

Cephia Toomer

Serial

Number:

08/786360

Date:

5/22/97

Phone:

308-2509

Art Unit:

1111

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Please search a composite comprising metal bonded chromium oxide, metal fluoride and optionally, one or more low temperature lubricating metals.

- (a) Metal bonding comprises a metal alloy containing Cr and at least one of Ni, Co or a mixture thereof. ^{selected from} Nickel, Co, Ni, Superalloy
- (b) Metal fluoride is ^{selected from} Group I alkali earth metal, Group II alkaline earth metal
- (c) Lubricating metal is selected Ag, Au, Pt, Pd, Rh, Cu or mix thereof.

Dellacorte, Christopher

STAFF USE ONLY

Date completed:

Searcher:

Terminal time:

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Search Site

STIC

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Type of Search

N.A. Sequence

A.A. Sequence

Structure (2) (and)

Bibliographic

Vendors

IG Suite

STN

Dialog

APS

Geninfo

SDC

DARC/Quest

Other

=> d 13 5,17 all

(author search)

L3 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 1997 ACS
AN 1994:661576 HCAPLUS
DN 121:261576
TI The friction and wear of ceramic/ceramic and ceramic/metal combinations in sliding contact
AU Sliney, Harold E.; **Dellacorte, Christopher**
CS NASA Lewis Research Center, Cleveland, OH, USA
SO Lubr. Eng. (1994), 50(7), 571-6
CODEN: LUENAG; ISSN: 0024-7154
DT Journal
LA English
CC 57-2 (Ceramics)
Section cross-reference(s): 56
AB The tribol. characteristics of ceramics sliding on ceramics are compared to those of ceramics sliding on an Inconel 718 Ni superalloy. The friction and wear of oxide ceramics and Si-based ceramics in air at 25-1200.degree. were measured for a hemispherically tipped pin in a flat sliding contact geometry. In general, esp. at high temps., the friction and wear were lower for ceramic/metal combinations than for ceramic/ceramic combinations. The better tribol. performance for ceramic/metal combinations is attributed primarily to lubricating nature of the oxidized alloy surface.
ST friction wear ceramic ceramic couple; nickel superalloy ceramic couple friction
IT Ceramic materials and wares
(friction and wear of ceramic/ceramic and ceramic/nickel superalloy couples in sliding contact)
IT Crystal whiskers
(silicon carbide; friction and wear of nickel superalloy against alumina matrix **composites** contg.)
IT Friction
(wear, of ceramic/ceramic and ceramic/nickel superalloy couples in sliding contact)
IT 409-21-2, Silicon monocarbide, properties 1302-93-8, Mullite
1344-28-1, Alumina, properties 12606-10-9, Inconel 718
(friction and wear of ceramic/ceramic and ceramic/nickel superalloy couples in sliding contact)
IT 1314-23-4, Zirconia, properties
(partially stabilized; friction and wear of ceramic/ceramic and ceramic/nickel superalloy couples in sliding contact)
IT 12033-89-5, Silicon nitride, properties
(yttria-contg.; friction and wear of ceramic/ceramic and ceramic/nickel superalloy couples in sliding contact)

L3 ANSWER 17 OF 20 HCAPLUS COPYRIGHT 1997 ACS
AN 1991:497437 HCAPLUS
DN 115:97437
TI Sintered carbide-fluoride-metal **composites** for self-lubricating parts operating at high temperature
IN Sliney, Harold E.; **Dellacorte, Christopher**
PA United States National Aeronautics and Space Administration, USA
SO U. S. Pat. Appl., 10 pp. Avail. NTIS Order No. PAT-APPL-7-571 058.
CODEN: XAXXAV
PI US 571058 A0 910601
AI US 90-571058 900823
DT Patent
LA English
CC 56-4 (Nonferrous Metals and Alloys)
AB Sintered antifriction **composites** are manufd. from the

powder mixts. contg. Cr carbide 20-70, soft precious metal (esp. Au or Ag) 5-50, metal fluoride 5-20, and metal or alloy binder 20-60%. The sintered **composites** are suitable for bearings, bushings, valve seats, gears, and similar machine parts typically operating at 25-900.degree., esp. in an oxidizing or reducing atm. Preforms from the powder mixts. can be pressed, sintered at 900-1200.degree., and optionally densified.

ST antifriction sintered **composite**; chromium carbide **composite** antifriction; carbide **composite** antifriction; gold sintered **composite** antifriction; silver sintered **composite** antifriction; fluoride sintered **composite** antifriction

IT Friction
 (of sintered alloy **composite**, temp. effect on, in dry sliding on superalloy)

IT Bearings
 Bushings
 Gears
 (sintered **composites** for, with carbide and fluoride)

IT Fluorides, uses and miscellaneous
 (sintered **composites** with, for antifriction service at high temp.)

IT Antifriction materials
 (sintered, **composites**, for high-temp. service, manuf. of carbide-contg.)

IT Engines
 (valves, sintered **composites**, with carbide and fluoride)

IT Cobalt alloy, base
 Nickel alloy, base
 (sintered **composites** with, for antifriction service at high temp.)

IT 7440-22-4, Silver, uses and miscellaneous 7440-57-5, Gold, uses and miscellaneous 11130-49-7, Chromium carbide 12069-85-1, Hafnium carbide (HfC)
 (sintered **composites** with, for antifriction service at high temp.)